

## **ENGINEERING TECHNICIAN**

**772**

**DEPARTMENT:** James City Service Authority

### **NATURE OF WORK:**

Performs Geographical Information System (GIS), Computer-Aided Design and Drafting (CADD), and other technical- and administrative-related work of an engineering nature associated with the James City Service Authority (JCSA) water and sanitary sewer systems.

Work involves the application of administrative and advanced technical skills to a variety of projects, programs, and assignments primarily focused around development and maintenance of the water and sanitary sewer components of the James City County GIS. Uses initiative, judgment, and technical competency in the development of assignments, the preparation of work programs, and the oversight of computer-based systems. Work is performed under the general supervision of the JCSA Chief Engineer for Water.

### **ESSENTIAL FUNCTIONS OF THE JOB:**

Develops and maintains JCSA information in the County GIS.

Participates in the collection of global positioning system (GPS) data for the water and sanitary sewer systems and incorporates that data in the County GIS.

Furnishes technical assistance to the JCSA Chief Engineers and technical personnel with assignments related to hydraulic modeling of water and sanitary sewer systems.

Performs CADD assignments on an as-needed basis to develop drawings, maps, and standard details for JCSA projects, presentations, and reports.

Participates in all phases of infrastructure services, including technical oversight and computer applications; review of plans and specifications for compliance with rules, regulations, and standards; and receives and responds to technical questions from engineers, contractors, County personnel, and general public.

Participates in the collection of engineering data; performs engineering computations and analysis of collected data; makes recommendations; and assists in the preparation of technical studies and reports.

Manages the record drawings and filing systems.

Identifies and makes recommendations for revisions to JCSA Standards and Specifications.

Assists in coordinating the review of development plans with County departments and public agencies.

Performs work safely in accordance with departmental safety procedures and the County Safety Program. Operates equipment safely and reports any unsafe work condition or practice to supervisor.

Performs related work as required.

**OTHER RELATED DUTIES:**

Drives County vehicle to work sites, meetings, etc.

**JOB LOCATION AND EQUIPMENT OPERATED:**

Duties are performed primarily in an office with occasional visits to sites and facilities located throughout the County. Operates computer hardware/software related to County/JCSA GIS (Arcview) and CADD (Auto CAD), and other routine office applications. Requires occasional walking, sometimes over rough terrain.

**REQUIRED KNOWLEDGE, SKILL, AND ABILITIES:**

Thorough knowledge of Geographic Information Systems, including the methods and techniques of map research, compilation, digitizing, editing, and production.

Thorough knowledge of computers, plotters other associated hardware, computerized databases and data files.

Considerable knowledge of computer-aided drafting and mapping techniques, uses, and procedures.

Knowledge of engineering, design, and construction methods, techniques, and procedures.

Knowledge of the mathematical calculations used in the engineering and utility field.

Knowledge of surveying and related computations.

Ability to use computer hardware and software for engineering, technical, administrative, and computer-aided drawing applications.

Ability to organize project assignments, to obtain and apply data, and to analyze and process such information.

Ability to coordinate work with others.

Ability to establish and maintain effective working relationships with coworkers, County officials, consultants, contractors, and the general public.

Ability to communicate effectively, both orally and in writing; ability to perform technical writing.

Ability to perform physical activity, including walking, climbing, stooping, bending, and occasional lifting.

**MINIMUM QUALIFICATIONS:**

Bachelors Degree in Engineering, Geography, Cartography, GIS Studies, or related field, or Associates Degree supplemented by technical level courses in Cartography, GIS, or related field, and considerable related work experience which shall have included experience in GIS mapping; or any equivalent combination of training and experience which provides the above knowledge, skills, and abilities.

**NECESSARY SPECIAL QUALIFICATIONS:**

Must possess a valid Virginia drivers license and have an acceptable driving record based upon James City County's criteria.